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 NEWS 4 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update frequency
 NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
 NEWS 6 Mar 08 Gene Names now available in BIOSIS
 NEWS 7 Mar 22 TOXLIT no longer available
 NEWS 8 Mar 22 TRCTHERMO no longer available
 NEWS 9 Mar 28 US Provisional Priorities searched with P in CA/CAPLus and USPATFULL
 NEWS 10 Mar 28 LIPINSKI/CALC added for property searching in REGISTRY
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 NEWS 12 Apr 08 "Ask CAS" for self-help around the clock
 NEWS 13 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS 14 Apr 09 ZDB will be removed from STN
 NEWS 15 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS 16 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER
 NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available

 NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
 CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
 AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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09903101

=> fil reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE
ENTRY
0.21

TOTAL
SESSION
0.21

FILE 'REGISTRY' ENTERED AT 17:34:54 ON 03 MAY 2002
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STRUCTURE FILE UPDATES: 1 MAY 2002 HIGHEST RN 410069-15-7
DICTIONARY FILE UPDATES: 1 MAY 2002 HIGHEST RN 410069-15-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

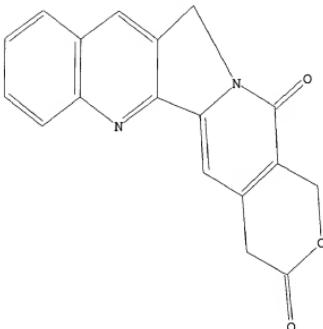
Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>
Uploading 09903101.str

L1 STRUCTURE uploaded

=> d
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

09903101

=> s 11 sss sam
SAMPLE SEARCH INITIATED 17:35:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 208 TO ITERATE

100.0% PROCESSED 208 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 3295 TO 5025
PROJECTED ANSWERS: 2956 TO 4604

L2 50 SEA SSS SAM L1

=> s 11 full
FULL SEARCH INITIATED 17:35:18 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3772 TO ITERATE

100.0% PROCESSED 3772 ITERATIONS 3348 ANSWERS
SEARCH TIME: 00.00.01

L3 3348 SEA SSS FUL L1

=> fil caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
140.28 140.49

FILE 'CPLUS' ENTERED AT 17:35:25 ON 03 MAY 2002
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FILE COVERS 1907 - 3 May 2002 VOL 136 ISS 18
FILE LAST UPDATED: 1 May 2002 (20020501/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s 13 full
L4 3330 L3

FILE 'HOME' ENTERED AT 17:42:03 ON 03 MAY 2002

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=> fil reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
FULL ESTIMATED COST          0.21          0.21
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FILE 'REGISTRY' ENTERED AT 17:42:09 ON 03 MAY 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 1 MAY 2002 HIGHEST RN 410069-15-7
DICTIONARY FILE UPDATES: 1 MAY 2002 HIGHEST RN 410069-15-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

```
=>
Uploading 09903101b.str
L1      STRUCTURE UPLOADED
=> d
L1 HAS NO ANSWERS
L1          STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
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Structure attributes must be viewed using STN Express query preparation.

=> fil casreact
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE ENTRY TOTAL
 0.76 SESSION 0.97

FILE 'CASREACT' ENTERED AT 17:43:34 ON 03 MAY 2002
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FILE CONTENT: 1974 - 28 Apr 2002 VOL ISS

Some records from 1974 to 1991 are derived from the ZIC/VINITI data file and provided by InfoChem.

This file contains CAS Registry Numbers for easy and accurate substance identification.

Crossover limits have been increased. See HELP RNCROSSOVER for details.

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> s ll sss sam
 SAMPLE SEARCH INITIATED 17:43:42 FILE 'CASREACT'
 SCREENING COMPLETE - 4 REACTIONS TO VERIFY FROM 1 DOCUMENTS

100.0% DONE 4 VERIFIED 0 HIT RXNS 0 DOCS
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED VERIFICATIONS: 4 TO 199
 PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1 (0 REACTIONS)

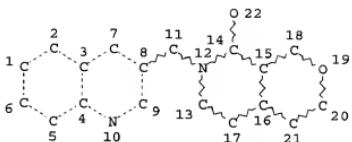
=> s ll full
 FULL SEARCH INITIATED 17:43:49 FILE 'CASREACT'
 SCREENING COMPLETE - 288 REACTIONS TO VERIFY FROM 52 DOCUMENTS

100.0% DONE 288 VERIFIED 0 HIT RXNS 0 DOCS
 SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1 (0 REACTIONS)

L8 HAS NO ANSWERS

L8 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 13 8
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

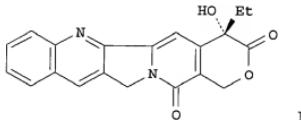
=> s 18 ful
FULL SEARCH INITIATED 10:18:51 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 206 TO ITERATE

100.0% PROCESSED 206 ITERATIONS
SEARCH TIME: 00.00.01

5 ANSWERS

L10 5 SEA SSS FUL L8

L11 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 2001:847228 CAPLUS
DN 136:118619
TI A Practical Six-Step Synthesis of (S)-Camptothecin
AU Comins, Daniel L.; Nolan, Jason M.
CS Department of Chemistry, North Carolina State University, Raleigh, NC,
27695-8204, USA
SO Organic Letters (2001), 3(26), 4255-4257
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
GI

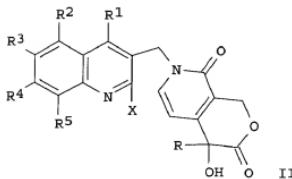
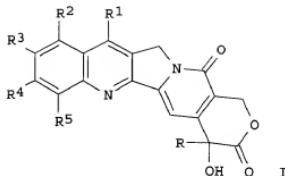


AB An asym. synthesis of (S)-camptothecin (I) has been accomplished in six steps starting from two com. available heterocycles.
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1996:35028 CAPLUS
DN 124:146559
TI Preparation of camptothecin intermediates and synthesis of camptothecin and camptothecin analogs
IN Comins, Daniel L.; Baevsky, Matthew F.
PA North Carolina State University, USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5475108	A	19951212	US 1993-114475	19930831
US 5478943	A	19951226	US 1995-410729	19950327
PRAI US 1993-114475		19930831		
OS CASREACT 124:146559; MARPAT 124:146559				

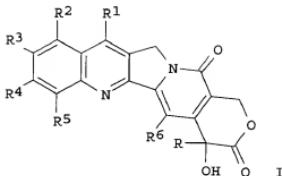
GI



AB Camptothecin and camptothecin analogs I (R = loweralkyl; R1 = H, loweralkyl, loweralkoxy, halo; R2, R3, R4, R5 = H, amino, hydroxy, loweralkyl, lower alkoxy, lower alkylthio, di(lower alkyl)amino, cyano, methylenedioxy, formyl, nitro, halo, trifluoromethyl, aminomethyl, azido, amido, hydrazino, or any of the 29 std. amino acids bonded to the A ring via the amino-nitrogen atom) were prepd. by cyclizing II (X = Br, iodo) by an aryl-to-aryl free radical coupling reaction to yield a compd. Thus, 8-(2-bromo-3-quinolylmethyl)-2,7-dioxo-3-ethyl-3-hydroxy-3,6-dihydropyrido[5,4-c]pyran (II, X = Br), prepd. from 2,7-dioxo-3-ethyl-3-hydroxy-3,6-dihydropyrido[5,4-c]pyran and 2-bromo-3-(hydroxymethyl)quinoline, was cyclized by treatment with Bu3SnH in toluene contg. AIBN to give 55% (.-.)-camptothecin.

L11 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS
 AN 1995:951497 CAPLUS
 DN 124:56389
 TI 14-Halocamptothecins
 IN Comins, Daniel L.
 PA North Carolina State University, USA
 SO U.S., 9 pp. Cont.-in-part of U.S. 5, 428, 166.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 5459269	A	19951017	US 1994-348452	19941202
US 5212317	A	19930518	US 1992-900650	19920618
US 5315007	A	19940524	US 1993-41782	19930401
US 5428166	A	19950627	US 1994-226877	19940412
PRAI US 1992-900650	A2	19920618		
US 1993-41782	A2	19930401		
US 1994-226877	A2	19940412		
US 1990-632970	A2	19901220		
OS CASREACT 124:56389; MARPAT 124:56389				
GI				



AB Camptothecins I (R = alkyl, alkylaryl, hydroxyalkyl, aryl; R1 = H, alkyl, alkoxy, alkylaryl, hydroxyalkyl, haloalkyl, aminoalkyl, dialkylamino, dialkylaminoalkyl, cycloaminoalkyl, aryl, aryloxy, nitro, cyano, halo, C-glycal, alkylthio, carboxylate ester; R2-R5 = H, amino, hydroxy, (un)substituted alkyl, aryl, alkoxy, alkylthio, alkylamino C-glycal, cyano, formyl, nitro halo, azido, amido, hydrazino; R3 and R4 may form a 5- or 6-membered arom. or dioxolane ring; R6 = halo) and intermediates in their prepns. were prepnd. Thus, 7-methoxycarbonyl-7-ethyl-9-hydroxy-7,9-dihydrofuranol[4,5-c]-6-methoxypyridine prepnd. by treating 2-methoxypyridine with Me3ClLi and 2-bromomethylene followed by reaction with N-formyl-N,N',N'-trimethylethylenediamine, cerium trichloride and Me₂alpha-oxobutyrate, was treated with aluminum isopropoxide followed by hydrolysis to give 7,2-dioxo-3-ethyl-3-hydroxy-3,6-dihdropyrido[5,4-c]pyran, which chlorinated with N-chlorosuccinimide and treated with 2-bromo-3-(bromomethyl)quinoline followed by cyclization of the product to give (S)-14-chlorocamptothecin.

L11 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1994:701123 CAPLUS

DN 121:301123

TI A Six-Step Synthesis of (.-.-)-Camptothecin

AU Comins, Daniel L.; Hong, Hao; Saha, Jayanta K.; Jianhua, Gao
CS Department of Chemistry, North Carolina State University, Raleigh, NC,
27695-8204, USA

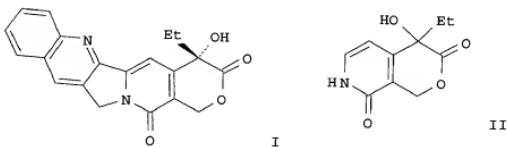
SO J. Org. Chem. (1994), 59(18), 5120-1
CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

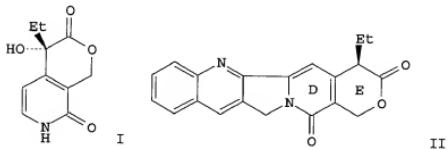
OS CASREACT 121:301123

GI



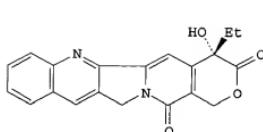
AB A six-step concise synthesis of (.-.-)-camptothecin (I) was achieved starting from 2-methoxypyridine and 2-bromoquinoline via hydroxylactone II and 2-bromo-3-(hydroxymethyl)quinoline.

L11 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1994:579942 CAPLUS
DN 121:179942
TI Asymmetric synthesis of camptothecin alkaloids: a nine-step synthesis of (S)-camptothecin
AU Comins, Daniel L.; Hong, Hao; Jianhua, Gao
CS Department of Chemistry, North Carolina State University, Raleigh, NC, 27695-8204, USA
SO Tetrahedron Lett. (1994), 35(30), 5331-4
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
GI

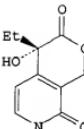


AB DE ring camptothecin intermediate I was prep'd. enantioselectively from 2-chloro-6 hydroxypyridine in six steps and used in a nine-step synthesis of (S)-camptothecin (II).

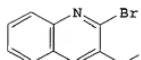
L11 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1993:169399 CAPLUS
DN 118:169399
TI A 10-step, asymmetric synthesis of (S)-camptothecin
AU Comins, Daniel L.; Baevsky, Matthew F.; Hong, Hao
CS Dep. Chem., North Carolina State Univ., Raleigh, NC, 27695, USA
SO J. Am. Chem. Soc. (1992), 114(27), 10971-2
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 118:169399
GI



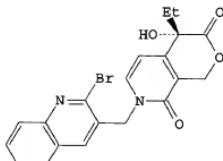
I



II



III



IV

AB A practical sym. synthesis of (S)-camptothecin (I) was accomplished in ten steps from com. available 2-chloro-6-methoxyquinaline and 2-chloroquinoline. The synthesis is convergent, combining enantiopure hydroxylactone II with bromoquinoline III through N-alkylation to give the ABDE ring intermediate IV. The final step required closure of the C-ring, which was accomplished using Heck cyclization to give enantiopure (S)-camptothecin. The overall yield of I was 11%.

L11 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1992:634326 CAPLUS

DN 117:234326

TI Preparation of camptothecin and analogs

IN Comins, Daniel L.; Baevsky, Matthew F.
PA North Carolina State University, USA
SO PCT Int. Appl., 38 pp.

CODEN: PIXXDZ

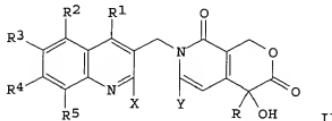
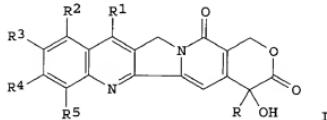
DT Patent

LA English

FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9211263	A1	19920709	WO 1991-US9598	19911218
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
US 5162532	A	19921110	US 1990-632970	19901220
CA 2112351	AA	19920709	CA 1991-2112351	19911218
CA 2112351	C	19980210		
EP 565621	A1	19931020	EP 1992-903792	19911218
EP 565621	B1	20000705		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06504062	T2	19940512	JP 1991-503829	19911218
EP 963988	A2	19991215	EP 1999-112300	19911218
EP 963988	A3	20010711		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC				
AT 194348	E	20000715	AT 1992-903792	19911218
ES 2147728	T3	20001001	ES 1992-903792	19911218
JP 2001055377	A2	20010227	JP 2000-224114	19911218
JP 3141069	B2	20010305	JP 1992-503829	19911218
US 5191082	A	19930302	US 1992-927217	19920810
US 5200524	A	19930406	US 1992-927220	19920810
US 5247089	A	19930921	US 1992-927219	19920810

US 5243050	A	19930907	US 1992-969790	19921029
US 5254690	A	19931019	US 1993-17026	19930212
US 5321140	A	19940614	US 1993-17648	19930212
JP 2001064257	A2	20010313	JP 2000-224113	20000725
JP 3234828	B2	20011204		
PRAI	US 1990-632970	A1	19901220	
	EP 1992-903792	A3	19911218	
	JP 1992-503829	A3	19911218	
	WO 1991-US9598	W	19911218	
	US 1992-927217	A1	19920810	
OS	CASREACT 117:234326;	MARPAT 117:234326		
GI				



AB Title compds. (I; R = alkyl; R1 = H, alkyl, alkoxy, halo; R2-R5 = H, amino, OH, alkyl, alkoxy, alkylthio, dialkylamino, cyano, methylenedioxy, CHO, NO2, halo, CF3, aminomethyl, N3, amido, H2NNH, amino acid residue bonded via N atom) were prep'd. by cyclization of intermediate II (X = halo; Y = H). Thus, 7-oxopyrido[5,4-c]-2-oxo-3-ethyl-3-hydroxy-3,6-dihydropyran (prep'n. starting from 6-chloro-2-methoxypyridine given) was stirred 30 min with KOCMe3 in Me2CHOH at 25.degree.; 3-chloromethyl-2-iodoquinoline (prep'n. from 2-iodo-3-quinolincarboxaldehyde given) in MeOH was added dropwise and the resulting mixt. was heated at 75.degree. for 24 h to give 80% II (X = iodo, R = Et, R1 = R2 = R3 = R4 = R5 = H, Y = H). The latter was heated with K2CO3, Bu4NBr, and Pd(OAc)2 in MeCN at 90.degree. for 5 h to give 47% (.-.-)-camptothecin.